



SOUTH

OCTOBER 2023

QofM

Question of the Month

Cultured meat? Lab-grown meat? Novari? What is this (not) new frontier in animal protein?

The recent U.S. Food and Drug Administration (FDA) approval for GOOD Meat and UPSIDE Foods to commercially produce and sell chicken grown in a bioreactor has renewed ongoing conversations about food, labeling, and agricultural practices.

Producing cultured animal cells is not a recent innovation. It dates back to 1971 when the first smooth muscle cell was grown in a lab environment from a guinea pig aorta.¹ Philosophically, it dates back to *Two Planets* by Kurd Lasswitz in 1897. While techniques have changed in the last 50 years, many general premises remain. An animal cell culture is

grown in a special environment, where a growth medium, the animal cells, and a nutrient solution are combined. Given the right conditions, the animal cells multiply and form structures that become a meat product for human consumption. Currently, these environments are small-scale, and without efficient bioreactors, cannot produce the product at a commercially viable scale.

Many terms are used to interchangeably describe animal proteins grown in a lab-like environment for human consumption rather than being raised in a traditional farming or fishery setting. A recent study - undertaken via

a cooperative arrangement between the U.S. Department of Agriculture (USDA) and the FDA - collected the most common and preferred terms to describe this process to determine emerging best practices for labeling these products. Best practices included preferences by industry associations, clarity for consumers on what the product was, and utilizing language that doesn't elicit negative preferences by consumers. The general terms collected and reviewed by the USDA and FDA include cultivated, cell-cultured, lab-grown, cell-based, cultured, 'artificial' [name of animal protein], cell-based food product derived from meat and poultry, cell-cultivated, cell-cultured food product, and novari. Novari was included as a possible new word to describe the category as a whole (e.g., novari chicken or novari beef).ⁱⁱ

Several Southern states preemptively enacted legislation governing the labeling of these types of animal protein, well before there was any regulatory approval for the products to be sold. Notably, [Missouri](#) was the first in 2018. Other Southern states include [Alabama](#), [Arkansas](#), [Mississippi](#), [Kentucky](#), and [South Carolina](#). Broadly, these statutes require clear labeling that informs consumers that the animal protein is not traditional meat, and, therefore, cannot be labeled as such. The labels must state that the product is cell-cultured or lab-grown, and descriptors must be conspicuously placed for the consumer to see. Alabama's laws differ; while the statute does not de jure prohibit the sales and marketing to consumers, it could possibly be interpreted to have that de facto effect.



ⁱRussell Ross, "THE SMOOTH MUSCLE CELL," *The Journal of Cell Biology*, vol. 50, no. 1, July 1, 1971, pp. 172-86, doi:10.1083/jcb.50.1.172

ⁱⁱMarlana Malerich and Christopher Bryant, "Nomenclature of Cell-Cultivated Meat & Seafood Products," *Npj Science of Food*, vol. 6, no. 1, December 10, 2022, p. 56, doi:10.1038/s41538-022-00172-0.